

September 21, 2004

Rick Olsen, General Manager
Canyon Fuel Company, LLC
P.O. Box 1029
Wellington, Utah 84542

Re: Postmining Land Use Change, Canyon Fuel Company, LLC, Banning
Siding Loadout, C/007/0034, Task ID #1936, Outgoing File

Dear Mr. Olsen:

The above-referenced amendment has been reviewed. There are deficiencies that must be adequately addressed prior to approval. A copy of our Technical Analysis is enclosed for your information. In order for us to continue to process your application, please respond to these deficiencies by November 13, 2004.

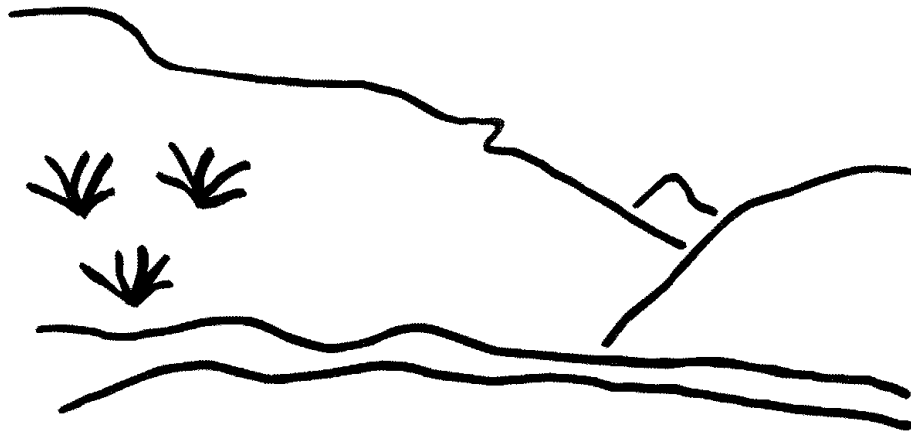
If you have any questions, please call me at (801) 538-5268 or Dana Dean at (801) 538-5320.

Sincerely,

Pamela Grubaugh-Littig
Permit Supervisor

an
Enclosure
cc: Price Field Office
O:\007034.BAN\FINAL\TA\TA 1936.DOC

State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Banning Siding Loadout
Post Mining Land Use Change
C/007/0034, Task #1936
Technical Analysis
September 21, 2004

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TECHNICAL ANALYSIS

The Division ensures compliance with the Surface Mining Control and Reclamation Act of 1977(SMCRA). When mines submit a Permit Application Package or an amendment to their Mining and Reclamation Plan, the Division reviews the proposal for conformance to the R645-Coal Mining Rules. This Technical Analysis is such a review. Regardless of these analyses, the permittee must comply with the minimum regulatory requirements as established by SMCRA.

Readers of this document must be aware that the regulatory requirements are included by reference. A complete and current copy of these regulations and a copy of the Technical Analysis and Findings Review Guide can be found at <http://ogm.utah.gov/coal>

This Technical Analysis (TA) is written as part of the permit review process. It documents the Findings that the Division has made to date regarding the application for a permit and is the basis for permitting decisions with regard to the application. The TA is broken down into logical section headings, which comprise the necessary components of an application. Each section is analyzed and specific findings are then provided which indicate whether or not the application is in compliance with the requirements.

Often the first technical review of an application finds that the application contains some deficiencies. The deficiencies are discussed in the body of the TA and are identified by a regulatory reference, which describes the minimum requirements. In this Technical Analysis we have summarized the deficiencies at the beginning of the document to aid in responding to them. Once all of the deficiencies have been adequately addressed, the TA will be considered final for the permitting action.

It may be that not every topic or regulatory requirement is discussed in this version of the TA. Generally only those sections are analyzed that pertain to a particular permitting action. TA's may have been completed previously and the revised information has not altered the original findings. Those sections that are not discussed in this document are generally considered to be in compliance.

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C/007/0034

Task ID #1936

September 21, 2004

TECHNICAL ANALYSIS

INTRODUCTION

INTRODUCTION

On May 26, 2004, the Division received a request for a change in the postmining land use for the Banning Loadout. Canyon Fuel Company (CFC) sold part of the permit area to East Carbonics Inc., who proposed to construct a CO₂ plant within the permit area and adjacent lands.

The change in the postmining land use would allow surface facilities such as the substation to remain as part of the postmining land use because the equipment would become part of the CO₂ plant. In addition, the area associated with the CO₂ plant would not be backfilled and graded because the current flat surface is needed for the construction and operation of the CO₂ plant.

To remove the area sold to East Carbonics Inc from the permit area a Phase III bond release would have to be granted by the Division and OSM. After the Division granted Phase III bond release, CFC would have to amend the MRP to have the site for the CO₂ plant removed from the permit area.

The Division was told by CFC that they plan to close and reclaim the entire Banning Loadout Facility in the near future. The Banning Loadout was placed in temporary cessation, which was consistent with CFC claim to reclaim the site.

CFC proposes to remove references in the MRP to ship all coal mine waste from the Banning Loadout to the Soldier Canyon Mine. The reasons are that refuse pile was never constructed at the Banning Loadout, CFC never constructed a refuse pile at the Soldier Canyon Mine and CFC recently removed the refuse pile from the Soldier Canyon Mine MRP. Since no coal mine waste is at the loadout the amendment will allow the references to be removed. If CFC ships coal mine waste to the loadout then they will have develop a disposal plan before bond release could be granted.

SUMMARY OF DEFICIENCIES

SUMMARY OF DEFICIENCIES

The Technical analysis of the proposed permit changes cannot be completed at this time. Additional information is requested of the permittee to address deficiencies in the proposal. A summary of deficiencies is provided below. Additional comments and concerns may also be found within the analysis and findings made in this Draft Technical Analysis. Upon finalization of this review, any deficiencies will be evaluated for compliance with the regulatory requirements. Such deficiencies may be conditioned to the requirements of the permit issued by the division, result in denial of the proposed permit changes, or may result in other executive or enforcement action and deemed necessary by the Division at that time to achieve compliance with the Utah Coal Regulatory Program.

Accordingly, the permittee must address those deficiencies as found within this Draft Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

Regulations

- R645-300-117.200**, The Permittee must provide the Division with an Affidavit of Publication for the public notice that appeared August 31 through September 21, 2004 in the Sun Advocate. 10
- R645-301-112** (1) The MRP and the Reclamation Agreement dated October 24, 2003 must state the same Registered Agent. (2) Chapter 2, corporate structure information must be updated to reflect the 100% ownership of Canyon Fuels Co. by Arch Coal..... 8
- R645-301-113.300** Table 1-1 Three Year Violation History June 2000 to 2003 of the MRP must either be updated with this application or a statement that there is no further information to be included for the year 2004 should be added to the application..... 8
- R645-301-120**, Please indicate the significance of Exhibit 5-5 of the MRP..... 11
- R645-301-241**, The MRP should be updated to indicate on pages 2-5 and 2-11 that the sediment from the Dugout Mine pond will be utilized as a topdressing over the sodic soils found in the vicinity of TP-2 and TP-3. 30
- R645-301-242.130**, *The reclamation plan should not include “discing the soil until the average soil clod on the surface is less than one inch in size (pg 2-9, 2-10, 2-13), ” The best*

SUMMARY OF DEFICIENCIES

<i>technology available is to leave the surface rough (i.e gouging of the surface) to retain moisture, trap seeds, and protect the soil surface from wind erosion.</i>	22
R645-301-521 , (1) The application must not delete the permit acreage and disturbed area information from Section R645-301-521, page 5-12 of the MRP. (2) The application must include a precise legal description of the disturbed area.	27
R645-301-521.160 , CFC must show the location of the permit and disturbed area boundaries on Exhibit 5-2, Banning Loudout Surface Facilities. CFC did not show the location of the permit and disturbed areas in the section marked with blue hatches (Post Mining Land use Change Area.)	17
R645-301-542.200 , CFC must submit a reclamation map that shows the contours for the Banning Site if the alternative post mining land use plan is implemented. At a minimum the map must show the final reclamation contours and how the drainages at the site blend into the drainages at the CO ₂ plant site.....	21
R645-301-820.351 , The Permittee must ensure that Appendix 8-1 and Table 5-3 of the MRP must contain current bonding information. And that all reclamation procedures including gouging must be included in the bond estimate.....	25
R645-301-830 , CFC must give the Division update reclamation cost estimates. The Division will CFC cost data in 2004 dollars upon request.	25
R645-310-820.111 , The Permittee is bonded for a disturbed area of 21.6 acres, however the MRP indicates on page 5-12 that the loadout surface disturbance is 23.27 acres. The bonded acreage must be at least equal to disturbed acreage. The Permittee must verify the disturbed acreage reported in the MRP. The Division will initiate steps to revise the bonded acreage reported in the Reclamation Agreement as necessary.	25

GENERAL CONTENTS

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

Analysis:

The MRP indicates that Canyon Fuel Company, LLC operates the Banning Loadout C/007/034 (Section 111). Ownership and control information for Canyon Fuel Company, LLC was recently updated (December 2003) and is presented in Figure 1-1 and in Section 112 of the MRP.

The MRP indicates that Canyon Fuel Company, LLC is owned 65% by Arch Western Resources, LLC and 35% by Itochu Coal International Inc, all are Delaware Corporations. However, the Division has known of the buy-out of Itochu Coal by Arch Western since July 15, 2004 (Field Visit #332). The information presented in the application and in the MRP must be revised to reflect recent business decisions.

Arch Western Resources, LLC is owned 99% by Arch Western Acquisition corporation that is in turn wholly owned by Arch Coal, Inc all Delaware Corporations. The remaining 1% ownership of Arch Western Resources, LLC belongs to Delta Housing Inc which is wholly owned by Atlantic Richfield Co., both Delaware corporations.

Section 112 provides information on names and corporate employee identification of the interested parties. Since the date of this a

The Permittee's registered agent is listed as CT Corporation in the MRP, but is listed as Canyon Fuel Corp, LLC in the Reclamation Agreement dated October 24, 2003.

Section 521, page 5-13 of the application, indicates that the operation is run by Soldier Canyon Mine and Savage Coal Service Corporation (Coal Service) under an agreement with the applicant.

Findings:

The information provided does not meet the requirements of the Regulations for Identification of Interests. Prior to approval, the Permittee must provide the following, in accordance with:

GENERAL CONTENTS

R645-301-112 (1) The MRP and the Reclamation Agreement dated October 24, 2003 must state the same Registered Agent. (2) Chapter 2, corporate structure information must be updated to reflect the 100% ownership of Canyon Fuels Co. by Arch Coal.

VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

Analysis:

Table 1-1 Three Year Violation History June 2000 to 2003 lists the violations for the Banning Loadout, Utah affiliated mines and other affiliates. The application should either include an update for the last year or a statement that there is no additional information to be included in Table 1-1 for the last year.

Findings:

The information provided does not meet the requirements of the Regulations for Identification of Interests. Prior to approval, the Permittee must provide the following, in accordance with:

R645-301-113.300 Table 1-1 Three Year Violation History June 2000 to 2003 of the MRP must either be updated with this application or a statement that there is no further information to be included for the year 2004 should be added to the application.

RIGHT OF ENTRY

Regulatory Reference: 30 CFR 778.15; R645-301-114

Analysis:

Right of way information is described in the text, Section 114 pages 1-31 through 1-33 and Appendix 1-5. The Rights of Way are illustrated on Exhibit 4-1. Rights of way have been obtained from the BLM, the State of Utah, and the Railroad.

The disturbed area at Banning Siding Loadout is **approximately** 30 acres. The most complete legal description of the area to be reclaimed is found in Exhibit B of the Purchase and

GENERAL CONTENTS

September 21, 2004

Sale Agreement between Canyon Fuel Company L.L.C and East Carbonics, Inc., dated May 9, 2003, found in Appendix 1-5 of the MRP.

The Purchase and Sale Agreement between Canyon Fuel Company, L.L.C. and East Carbonics Inc., dated May 7, 2003, is included in Appendix 1-5. This agreement indicates the Buyer's willingness to retain the substation for post-mining land use. The agreement does not transfer the State Lease or BLM Right of Ways. No water rights are conveyed with this agreement.

Findings:

The information provided meets the Right of Entry requirements of the Regulations.

LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

Analysis:

Information is provided in Section 115 of the MRP.

Findings:

The information provided meets the requirements of the Regulations.

PERMIT TERM

Regulatory References: 30 CFR 778.17; R645-301-116.

Analysis:

The Mining and Reclamation Plan (MRP) for the Banning Loadout was originally approved by the Division of Oil, Gas and Mining on October 24, 1988 and renewed subsequently on October 24, 1993, October 24, 1998, and on October 24, 2003. The permit term expires October 2008.

The Loadout went into Temporary Cessation on March 7, 2000.

Findings:

The information provided is adequate to meet the permit term requirement of the Regulations.

PUBLIC NOTICE AND COMMENT

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

Analysis:

In accordance with R645-301-414 *et seq*, the post mining land use change application is subject to the requirements of R645-300-120 public participation. The notice is being published in the Sun Advocate (Price, Utah) on consecutive Tuesdays from August 31 through September 21, 2004. The public will have an opportunity to comment for thirty days after the last date of publication.

A copy of the advertisement as it appeared shall be submitted to the Division. The public will have an opportunity to comment for thirty days after the last date of publication.

Findings:

This significant revision requires public participation. The public will have an opportunity to comment for thirty days after the last date of publication which is September 21, 2004. Prior to approval, the Permittee must provide the following, in accordance with:

R645-300-117.200, The Permittee must provide the Division with an Affidavit of Publication for the public notice that appeared August 31 through September 21, 2004 in the Sun Advocate.

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

Exhibit 5-4 and 5-5 in the MRP provide information on surface ownership. Exhibit 5-4 is being revised with this application. The Permittee should indicate the significance of Exhibit 5-5 in the MRP.

GENERAL CONTENTS

Findings:

Prior to approval, the Permittee must provide the following, in accordance with:

R645-301-120, Please indicate the significance of Exhibit 5-5 of the MRP.

MAPS AND PLANS

Regulatory Reference: 30 CFR 777.14; R645-301-140.

Analysis:

Exhibit 5-4 shows the location of the Banning Siding Loadout and surrounding surface ownership. Exhibit 5-1 shows the Banning Siding disturbed area and the location of the acreage to be transferred to adjacent surface owner, East Carbonics Inc.

Findings:

The information provided is adequate for the purpose of the Maps and Plans requirements of the Regulations.

OPERATION PLAN

OPERATION PLAN

MINING OPERATIONS AND FACILITIES

Regulatory Reference: 30 CFR 784.2, 784.11; R645-301-231, -301-526, -301-528.

Analysis:

The change in the postmining land use to allow the construction of a CO₂ plant did not change the approved use of the Banning Loadout or how operations were conducted. The change in the postmining land use would allow CFC to leave the facilities that East Carbonics Inc. would need such as the substation intact after Phase III bond release.

Findings:

The information submitted in the amendment was adequate to meet the minimum requirements of this section of the regulations.

RELOCATION OR USE OF PUBLIC ROADS

Regulatory Reference: 30 CFR 784.18; R645-301-521, -301-526.

Analysis:

CFC will not relocate or use any additional public roads in connection with the change in the postmining land use.

Findings:

The information submitted in the amendment was adequate to meet the minimum requirements of this section of the regulations.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Topsoil Removal and Storage

Exhibit 3-1 of the MRP shows the soil resources for the Banning Loadout. No stockpiled soil is identified on the map.

Approximately 700 cu yds of sediments brought to the site (in August 2001) from the Dugout Mine are stored in the equipment storage area and/or within the disturbed area of ASCA Area #2 (Exhibit 5-2, page 2-9). The MRP page 2-9A describes the placement of these sediments in a two-foot thick layer, surrounded by a berm, gouged for water retention, and seeded with the reclamation mix presented in Table 3-3 of the MRP. Laboratory analysis of this soil is found in Appendix 2-2.

Findings:

The information provided in the submittal meets the minimum requirements of the Regulations.

VEGETATION

Regulatory Reference: R645-301-330, -301-331, -301-332.

Analysis:

The Division considers that the postmining land use change does not affect plans, obligations, or agreements in the biology sections of the MRP. The Division, however, would like the Permittee to update the seed mixture and possibly other related reclamation plans sometime in the future.

Findings:

Information provided in the amendment is adequate to meet the minimum requirements of the Vegetation section of the regulations.

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

OPERATION PLAN

Analysis:

Disposal Of Noncoal Mine Wastes

CFC modified the disposal plan for noncoal mine waste by eliminating the specific contractor that picking up the waste and the specific waste disposal facility in the MRP. CFC replaced the specific contractor and disposal facility with the commitment to use a licensed contractor who would haul the noncoal mine waste to a licensed disposal facility. The Division approved the change in order to give CFC more flexibility. CFC is still required to comply with all regulations for disposal of noncoal mine waste.

Coal Mine Waste

In several sections of the amendment, CFC removed the commitment to ship all coal mine waste to the refuse pile at the Soldier Canyon Mine. CFC recently changed the operation plan for the Soldier Canyon Mine by removing the proposed refuse pile. CFC removed the proposed refuse pile at the Soldier Canyon Mine because they removed the proposed wash plant from the MRP.

The Banning Loadout is in temporary cessation and CFC plans to reclaim the site. In addition, no coal mine waste is on site and CFC has no plans to ship any coal mine waste to the loadout.

Some coal is on site when CFC submitted the amendment. The Division was told by Vicky Miller that CFC is negotiating with third party who is interested in buying the coal. No coal would be on site during reclamation if the sale East Carbonics Inc goes through.

The lack of an approved plan to dispose of coal mine waste from the Banning Loadout is a potential problem. Because the site is in temporary cessation and CFC plans to reclaim the site the Division decided not to take any action at that time. If CFC shipped coal mine waste to the loadout or if coal mine waste was present when reclamation began the Division would require CFC to have plans for dealing with coal mine waste approved. Since CFC has an approved refuse site associated with the Dugout Mine the disposal of coal mine waste at the Banning Loadout should not be a problem.

Findings:

The information submitted in the amendment was adequate to meet the minimum requirements of this section of the regulations.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Diversions: General

Exhibit 5-2 shows the entire site and all associated hydrologic structures. The map indicates that a portion of the diversion ditch that encompasses the site will lie on East Carbonics' land, but inside the permit area. The Permittee has an agreement in-place with East Carbonics to access the land as needed, therefore the Permittee could still perform any necessary maintenance and inspection of the ditch.

Sediment Control Measures

The substation will be outside the permit area when the Division approves this amendment. East Carbonics, Inc. already owns the land. The small area exemption for the outslope of the substation pad will no longer apply to the Banning MRP.

Alternative Sediment Control Area (ASCA) #1 will now contain just 0.08 acres instead of the previous 0.43 acres. The amendment proposed no other changes to the ASCA .

Findings:

Information provided in the amendment is adequate to meet the minimum requirements of the Hydrologic Operation Plan section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Mining Facilities Maps

Exhibit 5-2, Banning Loadout Surface Facilities, shows the location of the area for which CFC proposes to change the postmining land use and the area that they sold to East Carbonics

OPERATION PLAN

Inc. The area with the blue hatching marked “Post Mining Land Use Change Area” does not have the permit and disturbed area boundaries shown. CFC must show all permit and disturbed area boundaries on Exhibit 5-2.

Certification Requirements

All maps submitted with the amendment were certified by a registered professional engineer.

Findings:

The information submitted in the amendment is not adequate to meet the minimum requirements of this section of the regulations. Before approval CFC must provide the Division the following in accordance with:

R645-301-521.160, CFC must show the location of the permit and disturbed area boundaries on Exhibit 5-2, Banning Loudout Surface Facilities. CFC did not show the location of the permit and disturbed areas in the section marked with blue hatches (Post Mining Land use Change Area.)

RECLAMATION PLAN

RECLAMATION PLAN

POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Analysis:

The pre-mining land use of the area was rangeland and wildlife (MRP, Chap. 4, p.4-7). The area is zoned for mining and grazing (Exhibit 4-1).

The approved postmining land use proposed in the MRP is a return to rangeland and roadways. The rangeland postmining land use is supported by a letter from the BLM Area Manager, dated February 21, 1989 (Appendix 4-5).

The Utah Coal Rules governing a change in post mining land use are R645-301-412.130, R645-301-413.300, and R645-301-414.

Section 112.500, page 1-11 of the MRP indicates the surface owners of the land within the permit area are United States (Bureau of Land Management), the State of Utah, Union Pacific Railroad, and East Carbonics Inc (ownership is illustrated on Exhibits 5-4 and 5-5). East Carbonics owns the land being considered for post mining land use change.

This post-mining land use change is for 0.41 acres of pad area associated with the substation within the disturbed area and an additional 0.42 acres of undisturbed area within the permit area (pp 4-6 and 4-7). The area being considered for post mining land use change totals 0.83 acres as shown on the revised Plate 5-2. The 0.83 acres were purchased by East Carbonics, Inc.

The Purchase and Sale Agreement between Canyon Fuel Company, L.L.C. and East Carbonics Inc., dated May 7, 2003, is included in Appendix 1-5. The agreement transfers ownership of lands in Section 16, SE/4SE/4; and Section 21 E/NE4, Township 15 South, Range 12 East, Carbon County Utah. An acreage figure is not included in the agreement, but as previously noted, the Permittee indicates the area is 0.83 acres. The Purchase agreement indicates the Buyer's willingness to retain the substation for post-mining land use.

The agreement does not transfer the State Lease or BLM Right of Ways. No water rights are conveyed with this agreement. Item 2.2 of the agreement indicates that the entire reclaimed

area will be transferred to the buyer after Canyon Fuel Company, L.L.C. receives full bond release.

The Division concludes that there is a likelihood for achievement of the industrial/commercial postmining land use for the 0.41 acres and that the use is impractical, nor inconsistent with other existing land uses: roadway and railroad and rangeland.

Findings:

The information provided meets the requirements of the Regulations.

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

CFC should be able to restore the site to the approximate premining contours. The reason for that is the site is on level ground. The slope ranges from 1% to 2% and no major earthwork occurred during site development, with the exception of sediment ponds. Therefore, the site will be restored to the approximate original contours.

Findings:

The information submitted in the amendment was adequate to meet the minimum requirements of this section of the regulations.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

General

CFC needs to have two backfilling and grading plans. The first plan is based on the approved reclamation plan, which is that CFC would reclaim the site as shown on Exhibit 5-6, Final Contour Map.

RECLAMATION PLAN

The second plan must be based on how CFC would reclaim the site if the alternative post mining land use was implemented. At a minimum, CFC must develop a contour map that shows how the drainages in the reclaimed area would blend into the drainages in the CO₂ plant site.

Findings:

The information in the amendment does not meet the minimum requirements for this section of the regulations. Before approval CFC must provide the Division the following in accordance with:

R645-301-542.200, CFC must submit a reclamation map that shows the contours for the Banning Site if the alternative post mining land use plan is implemented. At a minimum the map must show the final reclamation contours and how the drainages at the site blend into the drainages at the CO₂ plant site.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Redistribution

The Banning Loadout has disturbed approximately 20 acres (Exhibit 5-2). Chapter 2 (pages 2-9 through 2-15) and Chapter 3 (pages 3-8 through 3-17) describe the soil reclamation plans for the Banning Loadout. The MRP describes removing surface coal (the surface will not exceed 50% coal); ripping to a depth of 18 inches; discing the soil until the average soil clod on the surface is less than one inch in size; grading to contour; and creation of depressions for moisture retention; addition of 40 lbs/acre of sulfur coated urea (45-0-0); incorporation of 2000 lbs of alfalfa or native grass hay; broadcast or drill seeding according to Table 3-3; and application of 2000 pounds/acre wood fiber mulch with chemical tackifier.

The Division does not agree with “discing the soil until the average soil clod on the surface is less than one inch in size (pg 2-9, 2-10, 2-13).” This practice may have biased the test plot results as alkaline soil is already impermeable to water. Creating a powdery surface would only compound the problem. The Division requests that the discing step is eliminated from Chapter 2 of the reclamation plan. The Permittee should rely instead on the gouging technology described in section R645-301-552.100 (page 5-83) of the MRP. Since 1992, the Division has been promoting the use of gouging for surface roughening.

RECLAMATION PLAN

Slickspots identified by TP-2 and TP-3 would benefit from the surface addition of sediment cleaned from the Dugout Mine pond (MRP page 2-9). Approximately 700 cu yds were brought to the site, to use for topdressing to a depth of six inches the slickspots. This topdressing would serve to allow seedlings to become established before encountering the alkaline conditions of the slickspot soils.

700 cu yds Banning sediments = 18,900 cu ft.
 $18,900 \text{ cu ft} \div X = 0.5 \text{ ft cover over slickspots.}$
 $X = 18,900 \text{ cu ft} \div 0.5 \text{ ft} = 37,800 \text{ sq ft.}$
 $37,800 \text{ sq ft} \div 43,560 \text{ sq ft/ac} = 0.86 \text{ acres of TP2 and TP3 area covered with Banning sediments.}$

Pending the outcome of the second laboratory analysis of the composite sample of sediments, the as built information should be used to update the substitute topsoil and reclamation information sections of the MRP in Chapters 2 and 3 to describe the use of these sediments as topdressing over the Slickspot locations within the loadout.

The MRP indicates on page 3-13 of Section R645-301-341.220 that soils of the regraded site will be sampled.

Findings:

The information provided does not meet the requirements for topsoil and subsoil redistribution. Prior to approval, the Permittee must provide the following, in accordance with:

R645-301-242.130, The reclamation plan should not include “discing the soil until the average soil clod on the surface is less than one inch in size (pg 2-9, 2-10, 2-13), ” The best technology available is to leave the surface rough (i.e gouging of the surface) to retain moisture, trap seeds, and protect the soil surface from wind erosion.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

Chapter 5 describes soil roughening in section R645-301-552.100 (page 5-83) of the MRP. Chapter 3 pages 3-8 through 3-17 describes incorporation of 2000 lbs of alfalfa or native grass hay into the soil surface. Mulch will be used at the site as described in R645-301-341.230, page 3-13, at a rate of 2000 lbs wood fiber mulch per acre anchored by a chemical tackifier.

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Findings:

The information provided meets the requirements of the Regulations.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Reclamation Backfilling And Grading Maps

The Division addressed the changes that are needed for the backfilling and grading map in the backfilling and grading section of the TA. To avoid duplication, the Division will not restate the deficiencies in this section. .

Certification Requirements.

The revised backfilling and grading maps must be certified by a registered professional engineer.

Findings:

The information in the amendment does is meet the minimum requirements for this section of the regulations.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

General

Bond Number 400SA1916 in the amount of \$350,000 was issued May 18, 2000. The Permit area described in Exhibit A of the Reclamation Agreement is 36.42 acres and the

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disturbed area is 21.6 acres. Exhibit 2.1-1 provided as Exhibit B of the Reclamation Agreement illustrates the permit and disturbed area.

Information contained in Appendix 8-1 Reclamation Performance Bond is outdated and describes a surety bond of \$211,000 issued in 1993 by Soldier Creek Coal Co.

Form of Bond

St. Paul Fire & Marine Insurance Company of Knoxville, TN issued a surety bond.

Determination of Bond Amount

Table 5-3 of the MRP outlines the bond cost and includes seeding of 21.4 acres (p 5-82). Worksheet No. 16 of Table 5-3 indicates a Grand Total of 299,248, escalating at 2.01%/yr for two years to an adjusted Grand Total of \$311,275. This calculation was incorporated into the plan in 1994. However the MRP indicates on page 5-12 that the loadout surface disturbance is 23.27 acres (this figure does not include the haul road). The Permittee must confirm the disturbed acreage listed in the MRP. The Division will initiate steps to revise the bonded acreage reported in the Reclamation Agreement as necessary.

The Division files indicate that there was a \$75,000 decrease made to the bond for a total of \$325,000 required in November 2001, however the Division still holds the \$350,000 bond.

The creation of small depressions for water harvesting is described in the backfilling and grading plan on page 5-83, but this process is not calculated in the bond. The bond should cover the reclamation of a 23.

Terms and Conditions for Liability Insurance

Section 117. Page 1-17 refers to Appendix 1-4, which contains an outdated (1999) copy of the certificate of liability insurance. The Division's bond file contains a liability insurance certificate, which expires 7/31/05. The Division is named as the Certificate Holder and will be notified if the policy is cancelled.

Findings:

The information provided does not meet the requirements for Bonding. Prior to approval, the Permittee must provide the following, in accordance with:

R645-310-820.111, The Permittee is bonded for a disturbed area of 21.6 acres, however the MRP indicates on page 5-12 that the loadout surface disturbance is 23.27

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acres. The bonded acreage must be at least equal to disturbed acreage. The Permittee must verify the disturbed acreage reported in the MRP. The Division will initiate steps to revise the bonded acreage reported in the Reclamation Agreement as necessary.

R645-301-820.351, The Permittee must ensure that Appendix 8-1 and Table 5-3 of the MRP must contain current bonding information. And that all reclamation procedures including gouging must be included in the bond estimate.

Analysis:

When the Division considers an alternative postmining land use change, they base the bond amount on the worst-case scenerio. The worst-case scenerio would involve reclamation of the entire site.

As part of the review process, the Division reviewed the bond amount. The Division reclamation estimate is \$339,000 and the bond amount is \$350,000. Therefore, the bond amount is adequate.

The bond information in the MRP is out of date. The calculations are based on 1995 figures. The Division will require that CFC update the bond calculations.

Findings:

The information in the amendment does not meet the minimum requirements for this section of the regulations. Before approval CFC must provided the Division the following in accordance with:

R645-301-830, CFC must give the Division update reclamation cost estimates. The Division will CFC cost data in 2004 dollars upon request.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

PERMIT AREA

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

Analysis:

The permit and disturbed areas are shown on Exhibit 5-1. The disturbed area and area of postmining land use change is shown on Exhibit 5-2. The surface ownership is shown on Exhibit 5-4. The permit area and disturbed area could not be found in the MRP or the application. (It was deleted from page 5-12.)

The Division's bond file indicates the permit area is 36.42 acres and the disturbed area is 21.6 acres, however the MRP indicates on page 5-12 that the loadout surface disturbance is 23.27 acres (this figure does not include the haul road). See deficiency written under Reclamation Plan/ Bonding.

The Reclamation Agreement indicates that the legal description of the permit area is all or portions of sections 15, 16, 21, 22 in T 15 S, R 12 E, and "described more precisely in the Banning Mining and Reclamation Permit." However, there is no further precise legal description in the MRP narrative, with the exception of the outline of the portions of sections 15, 16, 21, and 22 shown on Exhibits 5-1 and 5-2. Perhaps the most precise information is found in the Purchase Agreement between Canyon Fuel Company, L.L.C. and Carbonics Inc. included in Appendix 1-5 of the MRP. The application must include a precise legal description of the disturbed area.

The acreage undergoing post mining land use change is 0.41 acres of pad area associated with the substation within the disturbed area and 0.83 acres of the permit area (pp 4-6 and 4-7).

Findings:

The information provided does not meet the requirements for reporting of permit area. Prior to approval, the Permittee must provide the following, in accordance with:

R645-301-521, (1) The application must not delete the permit acreage and disturbed area information from Section R645-301-521, page 5-12 of the MRP. (2) The application must include a precise legal description of the disturbed area.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

Analysis:

At Banning Loadout, the precipitation is seven to nine inches annually. The climate regime is aridic or torric.

Soil resource information for the Banning Loadout is provided in Chapter 2, Volume 1 of the MRP. The native soil is the Ravola series. The site was disturbed pre-law and no topsoil was salvaged. Appendix 2-3 provides an SCS Map Unit description of the Ravola-Slickspot Complex. An excerpt is rewritten below:

The Ravola soil is very deep and well drained. It formed in alluvium derived dominantly from sandstone and shale. The present vegetation in most areas is mainly greasewood, alkali sacaton, pricklypear, Russian thistle, galleta, and Indian ricegrass. Typically, the surface layer is light brownish gray loam about 8 inches thick. The underlying layer to a depth of 60 inches or more is light brownish gray loam. This soil is strongly alkaline below a depth of 20 inches.

Slickspots are barren or nearly barren areas. They have a very strongly alkaline, nearly impervious surface layer of loam about 4 inches thick. The underlying layer is light grayish brown loam and silt loam. This layer is strongly saline and is moderately alkali or strongly alkali.

Test pits and laboratory analysis are found in Appendix 2-2. Three soil pits were dug to a depth of 54 inches. Sample locations are shown on Exhibit 3-1. Test Pit 1 in the vicinity of the equipment storage area seems to represent the native Ravola soils. The pH of the soil in TP-1 ranges from 8.3 to 8.5; the Electrical Conductivity of TP-1 is 0.8 to 0.9 mmhos/cm; the SAR of TP-1 is 1.4 in the surface six inches and from 3.1 to 3.7 from six to 54 inches. The soil texture was reported as a loam.

Test Pits 2 and 3 were dug in soils below the coal storage area and conveyor and seem to represent the native Slickspots. These soils were very high in pH (from 9.0 to 9.8) and have very high SAR values (from 37 to 78). The soil was sampled down to a depth of 54 inches. Sample locations are shown on Exhibit 3-1. The texture of these in-place sodic soils was described as silt loam (predominantly).

The SCS concludes their discussion of the Ravola soil in Appendix 2-3 with the statement, "It is not practical to revegetate large areas of the Ravola soil because of the low annual precipitation and the content of alkali in the soil."

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Reclamation test plots at Banning Loadout were started in November 1991 and were monitored through 1998 to evaluate the use of organic matter to alleviate extremely harsh soil conditions (Appendix 3-4). One of the conclusions from test plot monitoring was that the most successful treatment was to rip and gouge the surface then seed and mulch. None of the other treatments, such as applying manure, sawdust, or fertilizer, appeared to increase the amount of vegetation. The control areas that were simply gouged and mulched with no seed applied had little or no vegetation. The test plots showed vegetation could be established. However, in final reclamation, greater diversity than was found in the test plots will be required.

In about 1993, an area near the substation was gouged, seeded with Gardner saltbush (probably *Atriplex gardneri* Var. *tridentata*) and crested wheatgrass (*Agropyron desertorum*), and mulched. This revegetation effort was successful. However, stunted plants may have been due to the Slickspot soils underlying the substation location.

Approximately 700 cu yds of sediment from the Dugout pond was brought to the Banning Loadout site for use as substitute topsoil (MRP, pg 2-9). Laboratory analysis of composite samples of the sediments are found in Appendix 2-2. The sediment has a pH of 7.4 and an SAR of 2.34. These sediments have a texture of clay loam. The total organic carbon content of the sediments is approximately 10%. Using these sediments to cover the sodic Slickspot soils represented by TP-2 and TP-3 on Exhibit 3-1 (also described in Appendix 2-2) would enhance the reclamation of the Banning Loadout site. The use of these sediments may also aide in developing a more diverse plant population.

Laboratory analysis of composite samples of the sediments are found in Appendix 2-2. The MRP should be updated to indicate on pages 2-5 and 2-11 that the sediment from the Dugout Mine pond will be utilized as a topdressing over the sodic soils found in the vicinity of TP-2 and TP-3.

700 cu yds Banning sediments = 18,900 cu ft.
 $18,900 \text{ cu ft} \div X = 0.5 \text{ ft cover over slickspots.}$
 $X = 18,900 \text{ cu ft} \div 0.5 \text{ ft} = 37,800 \text{ sq ft.}$
 $37,800 \text{ sq ft} \div 43,560 \text{ sq ft/ac} = 0.86 \text{ acres of TP2 and TP3 area covered with Banning sediments.}$

The removal of 0.43 acres from the disturbed area will not affect the topsoil resource available for reclamation.

Findings:

The removal of 0.43 acres from the disturbed area will not affect the topsoil resource available for reclamation. However, the information provided does not meet the requirements of the Regulations for topsoil and subsoil resource information.

R645-301-241, The MRP should be updated to indicate on pages 2-5 and 2-11 that the sediment from the Dugout Mine pond will be utilized as a topdressing over the sodic soils found in the vicinity of TP-2 and TP-3.

SPECIAL CATEGORIES

REQUIREMENTS FOR PERMITS FOR SPECIAL CATEGORIES OF MINING

COAL PREPARATION PLANTS NOT LOCATED WITHIN THE PERMIT AREA OF A MINE

Regulatory Reference: 30 CFR Sec. 785.21, 827; R645-302-110, R645-302-260, et seq.

Analysis:

As outlined in the subsequent sections of this technical analysis, the application was reviewed under the Utah Rules for Coal Processing Plants Not Located Within the Permit Area of a Mine, R645-302-260. All provisions of R645-300 and R645-301 apply to this category of mining unless otherwise specified under R645-302.

Findings:

As discussed in this Technical Analysis, the information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. The Division's Findings are outlined under the R645-301 headings that follow.